

Claims:

1. Process for producing anhydrous alkali sulfide, comprising drying hydrous alkali sulfide by fluidized bed spray granulation.
2. Process for producing anhydrous alkali sulfide according to claim 1, wherein drying is performed under normal pressure or a slight overpressure of  $\Delta p=0$  to 200 mbar above ambient pressure.
3. Process for producing anhydrous alkali sulfide according to claim 1, further comprising recycling the fluidizing gas and removing excess water vapour by condensation so that it is free from exhaust gases.
4. The process for producing anhydrous alkali sulfide according to claim 1, wherein the hydrous alkali sulfide is selected from the group consisting of alkali sulfide solution, alkali sulfide suspension, alkali sulfide dispersion and alkali sulfide water of crystallization melt.
5. The process for producing anhydrous alkali sulfide according to claim 4, wherein drying is performed under normal pressure or a slight overpressure of  $\Delta p=0$  to 200 mbar above ambient pressure with an inert gas.
6. The process for producing anhydrous alkali sulfide according to claim 4, further comprising recycling the fluidizing gas and removing excess water vapour by condensation so that it is free from exhaust gases.
7. A device for performing the process according to claim 1, comprising the following components:
  - a granulator chamber with a diameter-height ratio of 1:1 to 1:5, having a feed base,

- an atomizing device installed in said chamber for the melts, suspensions, dispersions or solutions,
- a feed device for the fluidizing and drying medium,
- a discharge outlet located in the upper part of the chamber for the fine dusts or particles to be recycled,
- a solids separation system connected to the chamber via said discharge outlet and having an exhaust air pipe optionally fitted with a filter unit to remove the gas stream,
- a return system for the fine dusts and products to be recycled, which leads from the discharge outlet to the lower part of the chamber,
- an air separator located in the lower part of the chamber,
- a plant for recovering the solvent from the exhaust gas stream
- a recycling and conditioning apparatus for at least partial recycling and conditioning of the exhaust gas for renewed use as the fluidizing gas.